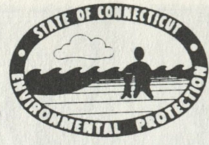


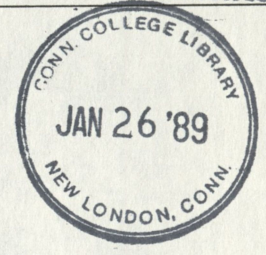
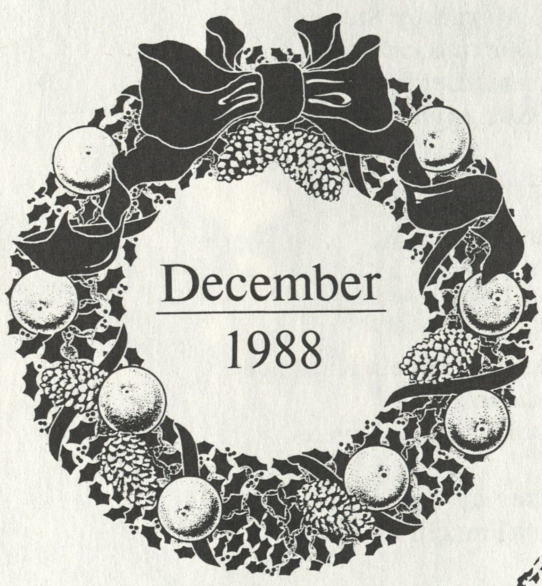
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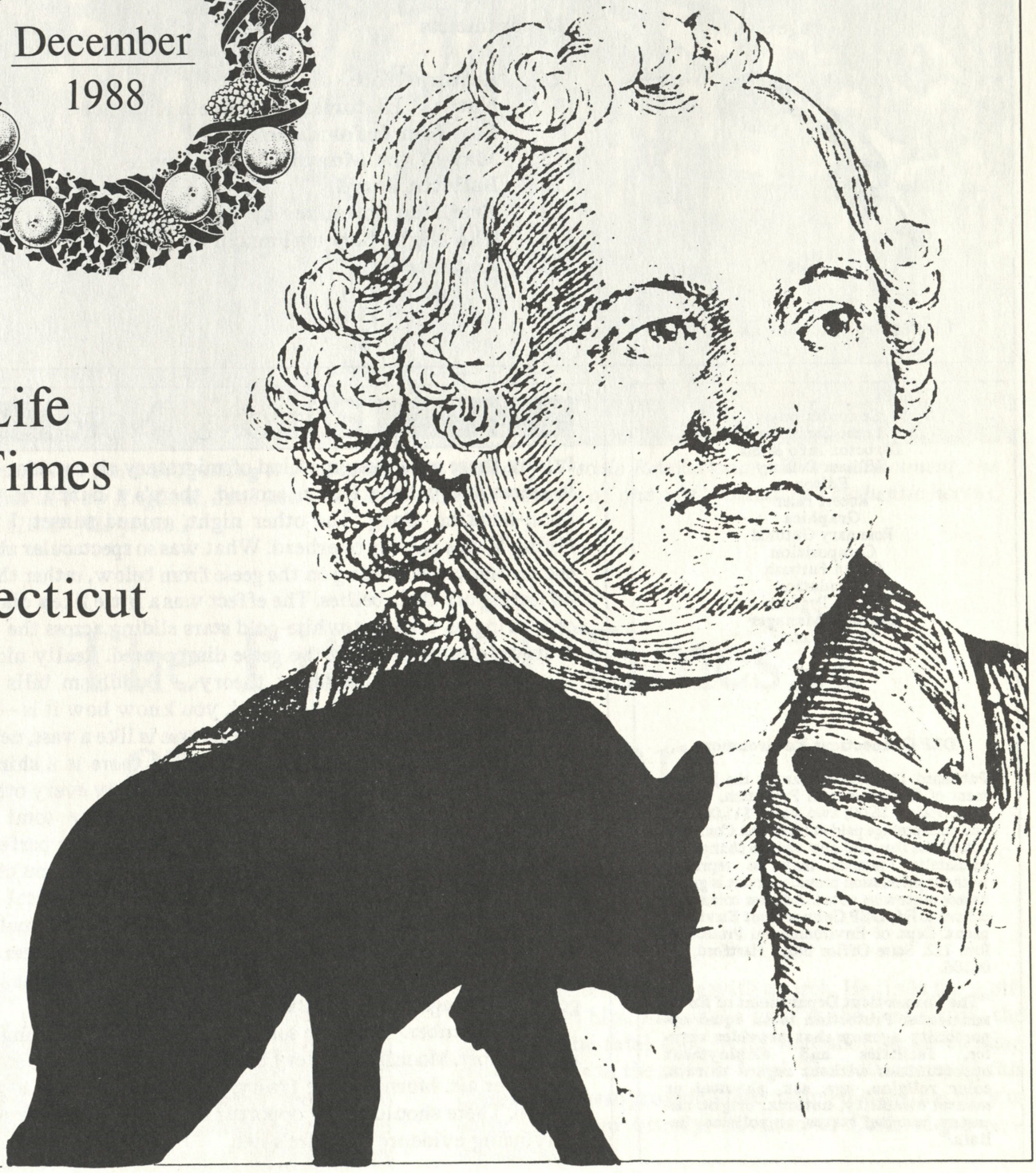
ENVIRONMENT



The Citizens' Bulletin of the Connecticut Department of Environmental Protection
Conn. Documents



The Life
and Times
of a
Connecticut
Hero

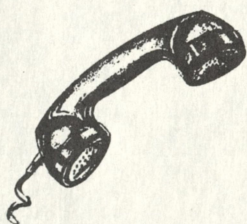


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Page 3.



Page 9.

Cover by Michael D. Klein

Features

- 3 **The Life and Times of Israel Putnam** by Lisa Garafola
The derring-do of an authentic Connecticut hero.
- 9 **If It's Suspicious, Report It** by William A. Allen
The Council on Environmental Quality will give you a hand.
- 12 **A Visit to a Salt Marsh** by Steven Fletcher
Spending a little time in a critical natural area.
- 16 **New Environmental Legislation**
A summary of 1988's environmental laws.

Departments

- 2 **Editor's Note**
- 7 **Natural Historian** by Daniela Kimmich
- 8 **For Your Information**
- 15 **Map of the Month** by Alan Levere
- 20 **Bulletin Board**
- 22 **Trailside Botanizer** by Gale W. Carter
- 23 **The Night Sky** by Francine Jackson
- 23 **Endnote**

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Editor's Note

I think there must be some kind of migratory air corridor over my house. It seems every time I turn around, there's a bunch of geese up there, honk-honking along. The other night, around sunset, I was out and a flying V was passing overhead. What was so spectacular about it was that the sunlight was shining on the geese from below, rather than from above, reflecting off their bellies. The effect was a little like a diamond necklace, or a string of brilliant white-gold stars sliding across the darkening sky. It stayed that way until the geese disappeared. Really nice.

There is an old Buddhist theory — Buddhism bills itself as being beyond all verbal theory, but, well, you know how it is — called "Indra's net of gems." The idea is that the Universe is like a vast, never-ending net, and that at every intersection of that net there is a shining, perfectly-faceted gem. Each gem reflects and is reflected by every other gem, resulting in an infinite, interdependent, interlocking total and complete perfection. Everything reflects infinitely reflecting perfection.

True? Who knows? Depends on whether or not you choose to believe a bunch of old Buddhists. Certainly from an ecological point of view, "Indra's net" makes a lot of sense. And, even an intellectual understanding of that vision of reality seems to make things more bearable. You don't have to actually see it all the time. An occasional glimpse is enough. Some geese flying against a magical sunset can do it.

It's December. There are some lovely things happening in Connecticut in December. Moonlight is very bright. You can see more stars in clear, cold December air. Mornings are frosty; we might even get a gentle snowfall or two. There should be a few opportunities to find at least some reasonably convincing evidence of Indra's net.

R.P.



Putnam Memorial State Park in Redding is the scene of an annual full-scale Revolutionary War reenactment, the largest of its kind in New England. Such activities keep alive the memory of one of Connecticut's authentic heroes, Israel Putnam. (DEP file photo.)

The Life and Times of Israel Putnam

by

Lisa Garafola

Environmental Intern

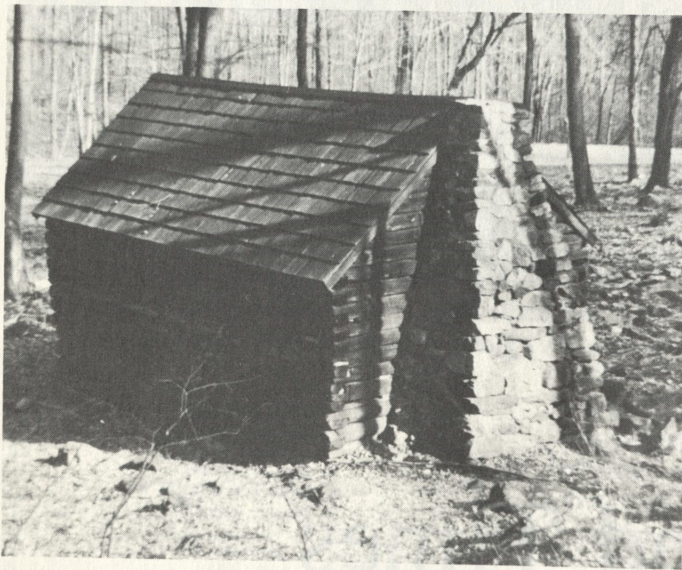
THE YEAR IS 1743. A SHE-WOLF TERRORIZES the residents of the little town of Pomfret, killing sheep, endangering the livelihood of local farmers. To protect their farms, the farmers plan to kill the wolf. After tracking the wolf to her den, however, they decide that further pursuit is too risky. Undaunted, one man volunteers to explore the cave. Aware of the wolf's fear

of fire, he enters the cave with a torch. He finds the wolf. She glares at him. Just as the wolf is about to attack, the man fires the fatal shot. With that shot, Israel Putnam raised his life to the mythic level. The adventures of this Connecticut hero provide a fascinating insight, not only to early American history, but also to Colonial-era consciousness.

There are, to be sure, elements in the story of Israel Putnam which jar us today, in what — we keep telling ourselves — are more enlightened times. We know today, for example, that wolves were not really the villainous creatures that they were portrayed to be, that all too frequently their slaughter was unnecessary and wanton. We also know that there is indeed another possible perspective on the relationship between whites and the red “savages” who were here in the beginning. So, when we read of the larger-than-life exploits of Israel Putnam, we should remember that times and ideas have changed. We know more now than we did then. So, having established that, let us take a look at the life and times of Israel Putnam.

PUTNAM WAS BORN IN SALEM VILLAGE, Massachussets, on January 7, 1718. After his marriage in 1739, he moved to Pomfret, Connecticut, and began life on the farm. His escapade with the wolf, however, was only the beginning of a lifetime filled with dangerous adventures.

Putnam's second brush with death occurred in 1757 when he was nearly burned at the stake by Indians. The Indians captured Putnam, who was at that time a general, during the French and Indian War. They tied him to a stake and amused themselves by throwing a tomahawk at his head; the object was to come as close as possible without hitting him. Later, just at the point when Putnam was to be burned at the stake, a French officer arrived at the scene, and Putnam's life was saved. The Indians provided Putnam with a blanket and moccasins and allowed him to march with them. The capture of Fort Frontenac in 1758 provided the opportunity for an exchange of prisoners, and Putnam's release was secured.



Cabins like this housed General Putnam's troops during the encampment at Redding in 1778-1779. It is claimed that that winter was one of the coldest ever experienced. (DEP file photo.)

ACCORDING TO LEGEND, Putnam managed to disable a 12-gun French vessel with the help of only four men. The vessel floated on a lake which the troops needed to cross. The American troops were no match for the French vessel, but Putnam swore to General Amherst he could overtake the vessel, bringing with him wedges, a ramming instrument known as a beetle, and a few good men. Seeing no other option, Amherst agreed to Putnam's seemingly outrageous plan. Putnam and the men took a boat to the stern of the vessel and hammered the wedges into a space between the rudder and the hull. When morning arrived, the vessel was set adrift in the middle of the lake, and as it blew ashore, the troops overtook it.

When America became embroiled in the War for Independence, Putnam was quick to rise to the occasion. He demonstrated his eagerness to serve his country when he heard news of the Battle of Lexington. Although plowing his field at the time, Putnam rushed to join the battle, not even taking the time to change his clothes. And, it is even possible that it might have been Putnam himself who, at the Battle of Bunker Hill, ran back and forth encouraging

the men with the famous line, "Don't fire 'til you see the whites of their eyes."

In 1778, Major General Putnam barely missed being shot by the British. With a party of 150 men, he planned to visit an outpost in Greenwich and obtain information about the British in New York. The party encountered British forces, and when Putnam realized the cavalry would charge, he ordered his men to ride to the next hill. Putnam's only chance for escape was to ride down a steep precipice. As he rode down the hill, the British shot at him, ripping his hat apart with holes, but no man was brave enough to follow Putnam's path.

THE WINTER OF 1778-79 was supposedly one of the coldest in North America's history. During that winter, Putnam's troops camped in Redding, Connecticut, in log huts. Each hut was only 12 feet wide by 16 feet long and either occupied by 12 privates or eight officers. Food and blankets were scarce. Naturally, the soldiers felt they deserved better treatment, and a group decided to march to Hartford and present their case to the General Assembly. When Putnam heard of the plans, he made a speech reminding the men of the revolutionary cause, of their families, and of their bravery. The men lay down their arms and only the ringleader was punished.

In the spring of 1779, Putnam was struck by paralysis and resigned from his position of Major General. He died one year later on May 19, 1790.

CONNECTICUT HAS NOT FORGOTTEN the legendary General Putnam. Putnam Memorial Park in Redding commemorates Putnam and the men who camped on the site in 1778 and 1779. There are two parts to the 232-acre park — a historical area and a picnic area.

The historical side of the park follows a circular path. A statue of General Putnam riding down Horse Neck Hill marks the entrance to the historical area of the park. The next site of interest is a monument honoring the soldiers encamped in Redding in 1778-79. Close to the monument are "firebacks," or the remains of the chimneys from the stone huts which the soldiers lived in. The fourth stop is the museum, which contains many artifacts from the Revolutionary era, including French bayonets, an early American newspaper, a flag collection, and General Putnam's saddle.

The next site of interest is Phillip's cave. The story here is that Phillip — his last name is lost in the past — was a Revolutionary War veteran who, long after the war, returned to live in the cave. For some reason, it was the one place he felt comfortable. Ultimately, Phillip was either shot by local farmers, or he froze to death during the winter. Across from the cave is the powder magazine, where the troops stored gunpowder during their encamp-



Statue of Israel Putnam at the entrance to the park which bears his name. Putnam remains today one of Connecticut's larger-than-life historical figures. (DEP file photo.)

ment. The officers' barracks have also been reproduced, so visitors can get a feeling for the hardships endured during that winter of 1778-79. The final stop is a cemetery which marks the site where those who did not survive the winter were buried. In addition to the historical area, Putnam Memorial Park contains recreational facilities and a scenic picnic area overlooking Putnam Lake.

Wolf Den State Park in Pomfret, offering 551 acres of hiking trails and picnic grounds, is the site the very cave where Putnam encountered the wolf. A portion of this park was originally purchased by the Elizabeth Porter Putnam Chapter of the Daughters of the American Revolution in 1899 and 1900. In 1925, the state purchased the site from the D.A.R.

The Israel Putnam Monument is a 12-foot bronze equestrian statue on a 13-foot pedestal. It was erected by the state in 1887, and is located in the center of the town of Brooklyn, Connecticut. By consent of his living descendants, the remains of General Putnam were removed

from the Brooklyn cemetery and placed in a sarcophagus under this monument. The original stone from Putnam's grave is located in the Hall of Flags in the State Capitol.

THE LIFE OF ISRAEL PUTNAM seems to flicker between the actual and the legendary. It becomes hard to tell what really happened, and what reflects the mind-set of a particular time in history. And, of course, finally, maybe there is no real difference between the two. But, what we do have in these stories of a man who was brave enough to go alone into the wolf's den, who survived capture by the Indians, who came directly to the aid of his country when it needed him the most, is a true Connecticut hero. Somehow, it's nice to know that there is someone like Israel Putnam, sitting tall and erect in the saddle, way back in a misty past, yet still sending a message of nobility, strength, and courage to us today. We can always use a little more of that.





The Long-Suffering Mistletoe

by
Daniela Kimmich

MISTLETOE has been a familiar part of Christmas festivities in Britain since the 17th century. However, its history as a ceremonial plant is far more ancient. The Druids of pre-Roman Britain believed mistletoe had mystical powers. Their high priests held the oak in great reverence and when, on rare occasions, an oak tree was found with mistletoe growing on it, the mistletoe was considered a gift of heaven. The priests would use these especially sacred trees as shrines. To start off the new year, they would cut some mistletoe branches from the oak with a golden hook and use them in religious ceremonies; animals would be sacrificed at the base of the tree.

In the middle of winter, mistletoe bears white berries. The Druids accept-

ed this early fruiting as a sign that the plant has powers of fertility. Later, herbalists prescribed infusions of mistletoe berries to cure sterility. The Christmas custom of kissing under the mistletoe can thus be seen to have pagan roots, reflecting the plant's association with fertility.

There is a legend which says that the Cross of Christ was made from the wood of mistletoe. Afterwards, the plant was made to suffer as a parasite, having to depend on other plants for its very existence. Today, the name "herbe de la Croix" is still used to refer to the plant in Brittany.

A semi-parasite on trees, such as apple, poplar, hawthorn, linden, willow, and — rarely — oak, mistletoe produces chlorophyll and makes some of

its own food, but it obtains water and minerals from its host. The fruit is eaten by birds. Seeds are dispersed via bird droppings. Seeds contained in excrement land on the branch of a host species and are firmly attached by the fruit's sticky resin.

The word mistletoe might have been derived from the Anglo-Saxon *misteltan*, in which *tan* signifies twig and *mistel* comes from the German *mist*, meaning dung; hence, "dung-twig." Another possible derivation of the word is from the Old Dutch *mist*, meaning bird lime — an extremely sticky substance that humans prepared to spread on surfaces and ensnare small birds which landed on them. Indeed, an ingredient of bird lime was often mistletoe berry resin (viscin). The name of the mistle thrush (*Turdus viscivorus*) also reflects this relation between bird and plant. The Roman proverb *Turdus ipse sibi cacat malum* ("The thrush prepares his own fate") undoubtedly refers to the irony of the mistletoe bird lime.

Only dwarf mistletoe (*Arceuthobium pusillum*) is found in Connecticut.

"Turdus ipse sibi cacat malum."

Old saying.

cut. The entire plant, less than one inch high, is found primarily on spruce trees. Sometimes, when attacked by dwarf mistletoe, a spruce tree will produce "witches' brooms," which are dense clusters of short spruce stems.

American mistletoe (*Phoradendron flavescens*) is a larger plant. It is found in North America as far north as New Jersey and Indiana, and forms a loose globe that can reach the size of a barrel. It may also be found indoors, especially during the holiday season, for the purpose of promoting kissing.

The author recently completed a master's program in ecology and evolutionary biology at The University of Connecticut.

"Take Pride in America" Awards

ON OCTOBER 6, GOVERNOR William A. O'Neill presented six awards to individuals and organizations for their efforts in the stewardship of public lands and natural resources during 1987. These awards represented Connecticut's participation in the national *Take Pride in America* program.

Participating in the award ceremony were Commissioner Leslie Carothers and Deputy Commissioner Dennis DeCarli of the DEP.

The Connecticut River Watershed Council, the Thames River Watershed Association, Mrs. Laverne Hinckley of West Hartford, the North Quarter Park Playground Improvement Committee in Chester, the Connecticut Council on Environmental Quality and the South Windsor Agricultural Land Preservation Advisory Commission were recognized in the state's second year of participation in the *Take Pride in America* program.

The Connecticut River Watershed Council has long been actively involved in all aspects of conservation and water quality protection throughout the Connecticut River Watershed area. The Council and Ms. Denise Schlener, its regional director, were specifically recognized for efforts in support of five municipalities in the watershed of the Blackledge River, which have led to the organization of a multi-town Blackledge River Watershed Association. The towns involved are Bolton, Glastonbury, Hebron, Manchester, and Marlborough.

The Thames River Watershed Association was incorporated in 1985. Its primary goal is the protection and enhancement of the recreational potential of the Thames River and its watershed area. In June, 1987, the Association conducted a clean-up day that resulted in the removal of debris

from public and private lands adjacent to the river and to a significant increase in public awareness of the need for action in the area.

Mrs. Laverne Hinckley has made a major contribution to the environmental education program at Westmoor Park in West Hartford. Perennial and herb gardens which she established and maintains have served as educational tools in the community.

The North Quarter Park Playground Improvement Committee is a classic example of public/private cooperation. A group of concerned citizens led by Mrs. Deborah Quinn-Munson, in cooperation with the Chester Park and Recreation Commission and other local officials, has raised funds, acquired new equipment, and achieved major improvements at a local park. The publicity generated has led to the start of a similar program in a neighboring town.

THE CONNECTICUT COUNCIL on Environmental Quality is an agency

of the state government, charged with monitoring the activities of other agencies as they affect environmental quality and with responding to specific citizen concerns. The Council's efforts were instrumental in generating community and legislative support for amendments to the inland wetlands act that were adopted by the 1987 General Assembly.

The South Windsor Agricultural Land Preservation Advisory Commission is a local agency, widely recognized as a leading force in farmland preservation in Connecticut. In what was once a predominantly agricultural community and is now one of the most rapidly developing towns in the state, the Commission has been a reliable source of information on agricultural needs and farmland preservation to local planning and zoning officials.

The *Take Pride in America* program is sponsored by nine federal agencies and numerous private organizations. Most of the 50 states have participated during the past two years.



Connecticut's Council on Environmental Quality was honored for its efforts by the Take Pride in American program. Left to right: Leslie Carothers, DEP commissioner; Astrid Hanzalek, member of CEQ; Governor William O'Neill; Nancy Kriz, former member of CEQ; and Karl Wagener, chairman of CEQ. (Photo: Anthony Calabrese.)



A clean and safe state requires the concerned involvement of all of us. If you see something that might have negative environmental consequences, report it. The Council on Environmental Quality will help you out. (DEP file photo.)

If You See Something Suspicious, Report It

Council on Environmental Quality will help you get through

by
William W. Allen
Research Intern
Council on Environmental Quality

NOT KNOWING WHERE TO TURN for help can be a problem for people who have witnessed what they feel may be an environmental crime. If you feel that public officials are not addressing an environmental prob-

lem in a timely manner, or if you feel caught in the "telephone shuffle," don't despair -- there is help.

The Connecticut Council on Environmental Quality (CEQ) was established in 1971 to act, in part, as an envi-

ronmental ombudsman. Although the CEQ does not have regulatory or enforcement authority, it is empowered to advise state agencies and to guide citizens through their options. (See *Environmental Trouble-Shooter's Directory*.)

Citizen complaints can be complementary to the state's enforcement agencies, which often cannot place enough staff in the field to catch environmental violations as they occur. If you notice an apparent breach of environmental law, do not assume that someone is taking care of the problem. If none of your fellow citizens has reported the problem, it is very possible that the DEP does *not* know about it. So, if you see something that doesn't look right, report it.

INDIVIDUALS DO NOT HAVE TO SHRUG their shoulders and accept such problems as noxious air pollution, illegal dumping, excessive noise from nearby factories, pesticides blowing from nearby properties, or unregulated wetland destruction. When you witness a suspect activity, record the time, location, and individuals or companies involved. Photographs can be particularly useful. (Avoid trespassing, however, and do not invite confrontation with potential violators.) If possible, as in the case of illegal dumping or blatant air pollution, note the license plate number of the offending vehicle. Alert local police and environmental authorities as soon as possible. To strengthen your credibility, avoid exaggeration; let the facts, which you have documented, speak for themselves. Try to pin down the exact nature of the violation as specified in state and local regulations. You do not have to become a legal authority for your complaint to be accepted, but experience has shown that the response might be more expeditious if enforcement personnel understand exactly what you think is wrong.

One citizen recently turned his frustration into action when his town persisted in burning construction debris and other bulky waste under permits which allowed only the burning of brush. Armed with the Connecticut statutes and regulations which prohibit the burning of painted wood, plastics, leaves, or anything other than actual brush, the citizen alerted the appropriate branch of the DEP. When the burning continued with no apparent changes, the complainant turned to the Council on Environmental Quality. With the citizen's convincing portfolio of photographs documenting the burning of plastic and construction debris, CEQ staff pressed the DEP to re-examine its enforcement of brush-burning regulations.

In another town, a citizen was bothered by the same type of problem — brush burning — that had been occurring regularly for months, if not years. Told by town officials that all necessary permits had been obtained, she called the CEQ anyhow, only to learn that no permits had been obtained and the town was violating several air pollution regulations. If the woman had not bothered to call, she might still be breathing that smoke today.

ON OCCASION, AN ENVIRONMENTALLY destructive activity is so enormous that citizens assume all necessary permits have been obtained. Upon seeing it, one naturally thinks, "No one would try to get away with this without getting permission." Make no such assumptions.

In a case that gained considerable notoriety, 20 acres of protected flood plain forest were levelled to improve navigation at a small airport. Though it was winter and few people were out of doors, surely many pilots and commuters on a nearby highway witnessed the destruction. The tree-cutting went on for weeks without the knowledge of any regulatory agency. Finally, a conservation-minded local resident took notice and called a town official, who in turn called the DEP. The person taking the call, however, was called away on another assignment and the next day, with the chain saws still roaring, the town official called the CEQ. CEQ staff contacted DEP staff, and both visited the site that afternoon. It was immediately apparent that at least three major environmental laws had been violated. The work was stopped, but remediation costs amounted to hundreds of thousands of dollars. The state owes many thanks to the citizen who called, but this environmental damage could have been averted if just one person who had seen it weeks earlier had made a simple phone call.

EACH ONE OF US MUST WORK HARD to preserve, protect, and pass on Connecticut's natural and cultural heritage for present and future generations," exhorts Governor William A. O'Neill in the *Environment/2000* plan, Connecticut's environmental strategy to guide the state into the next century. "I call together all branches and levels of government, business and industry, conservation organizations, educators, and the individual citizen to actively participate as trustees of the environment." The reporting of environmental violations is one way for the *individual citizen* to help preserve our state's future, and the Council on Environmental Quality stands ready to assist you. ■

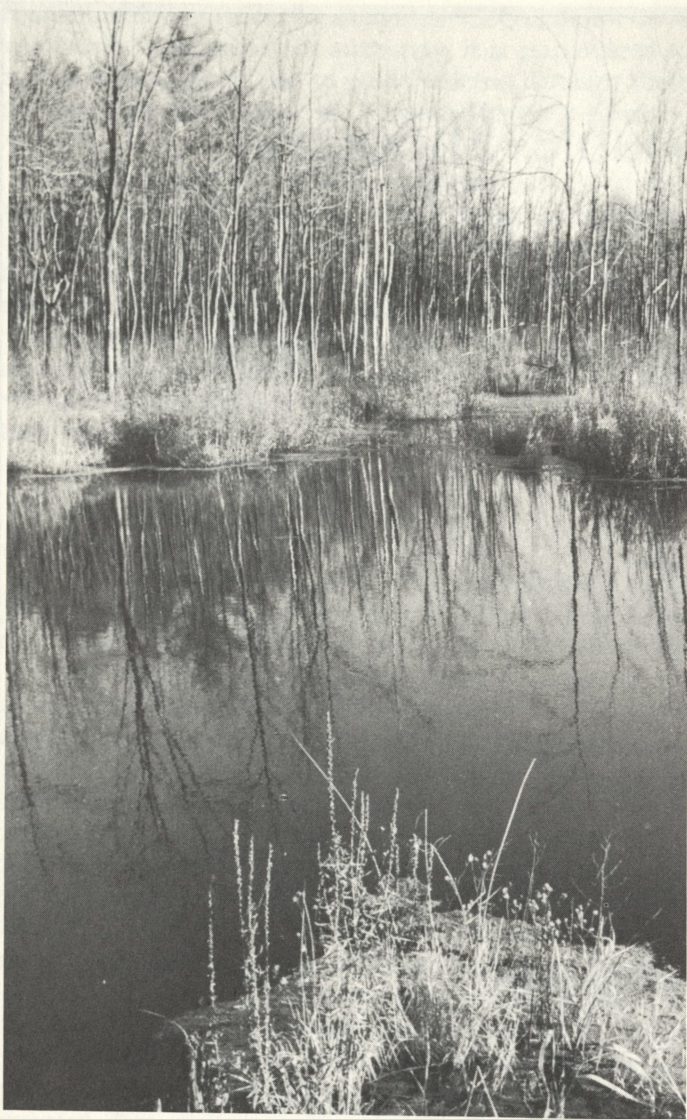




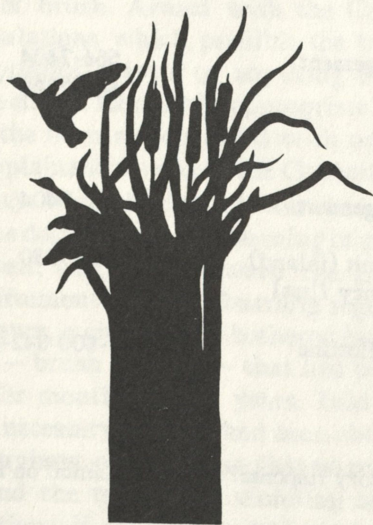
Environmental Trouble-Shooters' Directory

<i>If the problem is...</i>	<i>Call:</i>	<i>Phone #:</i>
Air Pollution (factory smoke; polluting trucks; disagreeable odor; brush burning)	DEP Air Compliance Unit	566-3160
Hazardous Materials (drums; leaking electric trans- former)	DEP Hazardous Materials or 24-hour emergency spills number	566-4924 566-3338
Noise (night clubs, rock crushers, motors, blowers, air- conditioners)	DEP Noise Control Program	566-7494
Pesticides (drift; banned products; spraying; unlicensed applicator)	DEP Pesticides Offices	566-5148
Septic System Problems (malfunctions; breakout; odors)	Department of Health Services	566-1251
Solid Waste (illegal dumping; improper landfill management)	DEP Solid Waste Management	566-3672
Water Diversions (dam; intake pipe; stream relocation or channelization)	DEP Water Resources Unit	566-7220
Water Pollution (suspicious discharge pipe; discolored stream; fish kill; etc.)	DEP Water Compliance Unit	566-3245
Waterway Obstructions (unpermitted dock or bulkhead; grading or tree-clearing)	DEP Coastal Area Management	566-7404 566-7280
Wetlands Disturbance (filling; clear-cutting; pollution; dumping; etc.)	DEP Coastal Area Management DEP Water Resources Unit (inland) (Try local wetlands agency first)	566-7404 566-7280
Wildlife and Fish (poaching; collection of protected species; etc.)	TIP (Turn In Poachers) Hotline (Reward possible)	1-800-842-HELP

Having trouble reaching the correct office? Still no response? Unsatisfactory response? Call the Council on Environmental Quality: 566-3510.



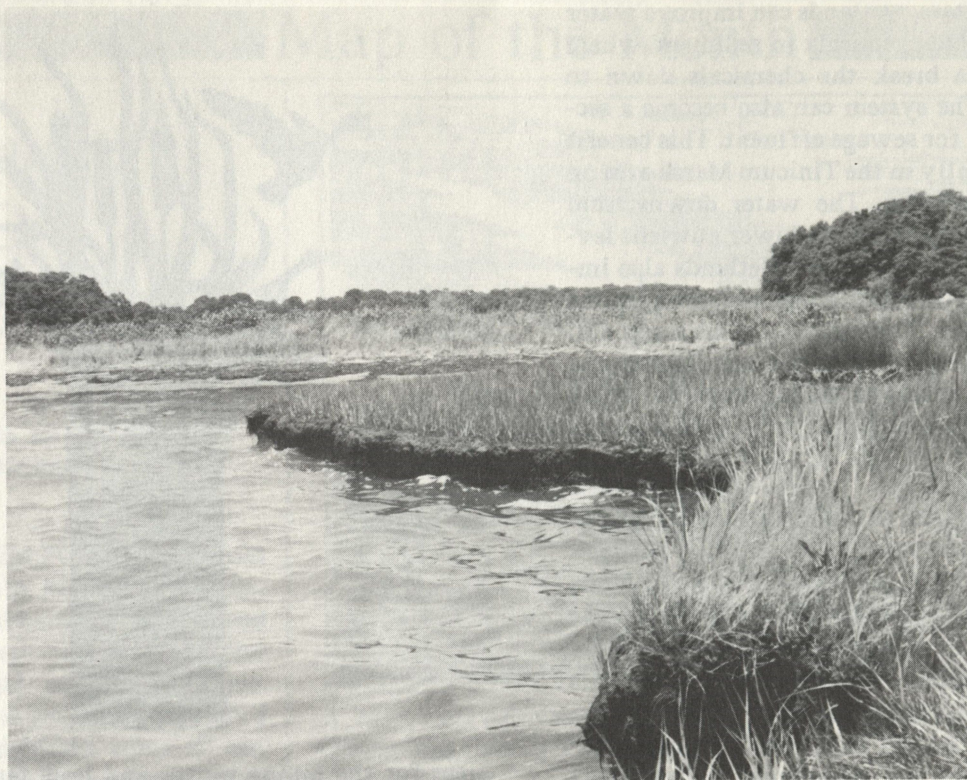
Wetlands in Connecticut, whether fresh or salt water, are classified as poorly drained, very poorly drained, alluvial, or flood plain. (DEP file photos.)



by
Steven S.W. Fletcher
 Writing Intern
 Dept. of Renewable Resources
 The University of Connecticut

THE MARSH WREN, its tail cocked, screeched its displeasure. Hovering above the stand of bull-rushes, the bird alerted the surrounding community of an intruding human presence. My father and I were paddling softly along in a strip-plank canoe, quiet, enjoying each other's company and the special beauty of one of Connecticut's unique habitats, the salt marsh. We were in Lyme, in the Great Island marshes, and it was there we saw the six osprey couples that have nested there. We watched them clutch fish in tightly-drawn talons and later bring the catch to hungry fledglings. The marsh was alive.

SALT MARSHES are a special type of wetland. Other wetland types include fresh water marshes, bogs, swamps, mangrove swamps, and prairie potholes — sometimes called the “duck factories” of the mid-west, due to the many waterfowl that breed there.



values. They provide

Wetlands tend to buffer the effects of shoreline erosion, which is a major cause of land loss.

Visit to a Salt Marsh

In Connecticut, wetlands are classified by soil type by the Connecticut Inland Wetland and Watercourses Act of 1972 as "poorly drained, very poorly drained, alluvial, and flood plain." (Watercourses are defined as marshes, swamps, bogs, rivers, lakes, ponds, streams, and all bodies of water, natural or artificial, that are contained within or flow through the state.) Connecticut wetland protection laws are among the most stringent in the country. Other states classify wetlands according to vegetation type.

Wetlands are the most biologically diverse biome (natural environment) on earth. Some are among the most productive in biomass (plant growth and energy) of ecosystems. This productivity is due in part to the flux of nutrients and water that constantly inundates the wetland.

Man benefits greatly from this energy and growth in wetlands. Some of the advantages include flood control, reduced shoreline erosion, filtering of pollutants and

sewage effluent, ground water recharge, and fish and wildlife values.

THE AMOUNT OF FLOODING controlled by wetlands depends on the topography and how the wetlands interact in the watershed. The flood waters are quieted in a wetland through friction between the emergent vegetation and the water and the sponge-like quality of the organic soils. Wetlands are able to retain the excess water and release it slowly back to the system.

Shoreline erosion is a major cause of land loss, water turbidity, and the decrease in channel depth. Wetlands buffer the effects of wave action through four factors: The gentle slopes of most coastal wetlands dissipate wave energy; vegetation slows wave velocity through friction; the root systems of plants bind together the highly organic soil particles; and suspended sediments are filtered back to the substrate through contact with the dense vegetation.

Acting like huge filters, wetlands can improve water quality by trapping toxic chemicals in sediment where some anaerobic bacteria break the chemicals down to harmless compounds. The system can also become a secondary treatment plant for sewage effluent. This benefit has been tested successfully in the Tinicum Marsh area on the outskirts of Philadelphia. The water downstream from the marsh showed significantly lower nutrient levels than that tested above the marsh. Wetlands also improve water quality by removing and recycling excess nutrients from the water. The leaching of nitrogen and phosphorus from agricultural areas can help lead to the eutrophication of lakes and bays, causing eventual death to the system. Wetland vegetation prevents this by taking up the organic nutrients for use in their own biomass production.

There are also fish and wildlife values associated with the wetland environment. Because of their value as a source of food, cover, and nesting habitat, wetlands attract huge numbers of birds. Migratory waterfowl use wetlands as resting and food stops. Many of the waders — storks, herons, egrets — could not survive without this habitat. This is due to the large number of fish that use wetlands as nurseries. Striped bass, weakfish, summer flounder, and shrimp are all commercially important species that use the wetland.

Many endangered and threatened species are found in the wetland ecosystem. During our early morning cruise through the marshes, we happened upon Griswold Point, Lyme. This desolate stretch of rosehip, marsh grass, and sand is the only barrier between the high energy environment of Long Island Sound and the relative quiet of the wetlands within the mouth of the Connecticut river. Griswold Point also remains as one of the last nesting



areas for the piping plover and least tern — two endangered species of shore bird. We scoured the area with our binoculars, hoping for a glimpse of the rare birds, to no avail. The land is owned by The Nature Conservancy, a group that buys wetlands and other natural lands for preservation.

Beyond the functional benefits of wetlands lie deeper, intangible values. They are a place of solitude and quiet, a place to rediscover a connection with the natural world and our fellow creatures who live there. ■



A lone figure pauses momentarily at Barn Island Fish and Wildlife Preserve in Stonington. The salt marsh is a place to rediscover our connections to the natural world.

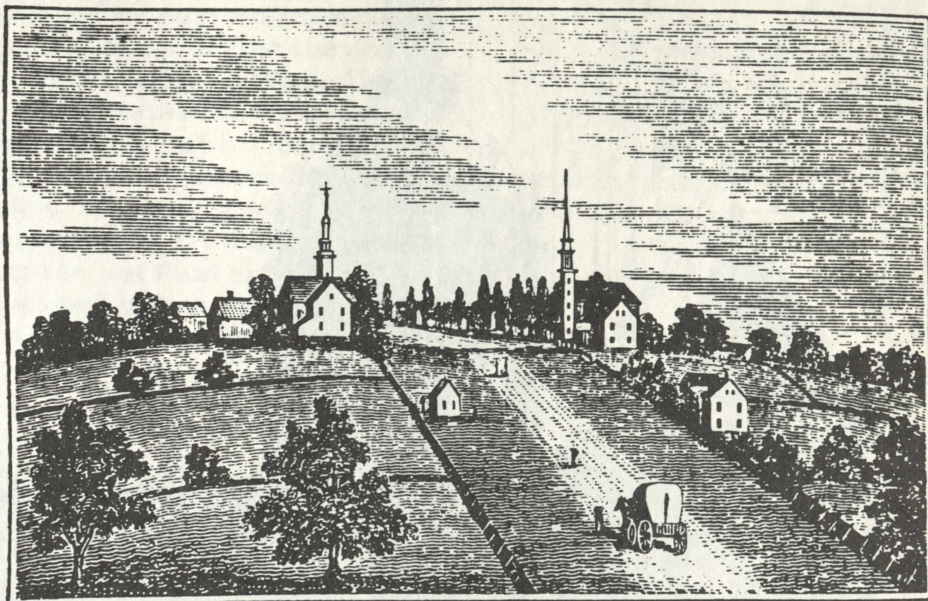
Resourceful Gift Suggestions

by
Alan Levere
Senior Environmental Analyst

IT DOESN'T SEEM POSSIBLE it could be December again. My father told me the months would start to roll around quicker every year, but I guess I never figured it would happen this soon. None the less, it is year's end, and it's a good time to highlight some of our most popular maps and publications of the last 12 months. With Christmas just around the corner, it might help with some shopping ideas.

IN SHEER NUMBERS, *The Face of Connecticut* continues to be our all-around best seller. This book describes events such as continental drift, a millennia of erosion, the transition of glacial epochs, and how they all affect the way we use, and live on, the face of the land. *The Face of Connecticut*, with its color photos and easy-to-read text, takes you to a Connecticut I can almost guarantee you have not seen before. It's one of those books that no matter who receives it and no matter what section they read, they will get something from it. (196 pages, many fine color photographs, softcover. \$12.95.)

Some of the most useful information available for the fisherman may be found in the *Guide to Lakes and Ponds of Connecticut*. It contains the kind of information needed when out on the water. We just never expected the kind of continued response that we still get. The booklet contains bottom depth maps for 73 Connecticut lakes and ponds with accompanying information on boat launch location, water body surface area, what types of



A 1838 view of Newtown, a hilltop farming town in the Western Uplands. (From *The Face of Connecticut*.)

fish you might catch there, what facilities are there, and some of the regulations to keep in mind while fishing. (73 pages, handy spiral binding; \$4.65.)

I remember writing this column for the DEP Property Map back in May and thinking of how I could possibly get across all the information this map features in just one article. I don't know if it worked or not, but it sure became popular quickly. I can honestly say that if you have any interest at all in where there are areas set aside in the state for you to discover and enjoy, this is the map that will guide you. We have 200,000 acres to take advantage of, including state forests, trails, natural areas, state parks, beaches, mountains, and even some waterways. This multi-colored map features over 500 locations encompassing 310 square miles. (About 55 by 44 inches in size, scale of 1:125,000; \$7.44.)

Another map we carry simulates the three dimensions of the state surface, including the hills and mountains, on a flat sheet of paper. It's all done with shadowing, a technique which puts an imaginary sun on the east side of the state that illuminates the east-facing slopes and shadows the west-facing slopes. This gives a look to the map that almost makes those hills come right up off the paper. With this

map you can now see exactly where the Central Valley and the Eastern and Western Uplands not only occur on the landscape, but where the hills reach their highest peaks as well. (Same size and scale as the DEP Property Map; but only \$4.00.)

Not quite as exciting, and really something that is hard to picture being given as a gift, but no less popular, is the newly revised, and now back in print publication *What's Legally Required*.

This 'legal manual' presents complex decision-making procedures in a concise and usable format. Every municipal land use commissioner and all land use planners in the state should have a 1988 copy, which supercedes all previous editions. If you are involved with municipal planning, zoning, wetlands, or conservation, your role in granting variances and issuing special permits or exceptions is critical to the municipality's land use program. Since many land use decisions, particularly those involving variances, have been overturned by the courts on procedural grounds, *What's Legally Required* becomes that much more important. It will guide you through the Connecticut statutes in an accurate and usable format. (91 pages, softcover; \$10.00.)



(DEP file photo.)

Connecticut's New Environmental Laws

The following legislative acts of environmental significance were passed in Connecticut in 1988:

PA 88-98: An act concerning landing fish and fluorescent orange colored clothing requirements while hunting and authorizing the appointment of lake patrolmen.

This act makes the law governing wearing fluorescent orange clothing while hunting expire on January 1, 1989; allows the DEP commissioner to appoint lake patrolmen; and limits the exemption from the landing license requirement for certain commercial

fishermen. Effective date: Upon passage.

PA 88-118: An act concerning general permits for discharges into the waters of the state.

This act allows the DEP commissioner to issue general permits allowing certain categories of wastewater discharges without issuing individual permits. The commissioner must adopt regulations establishing categories of discharges eligible for general permits. The regulations may include minimum requirements for treatment or control of these discharges.

The act also allows the commis-

sioner's designated agent to perform the commissioner's duties under the water pollution control statutes. Effective date: January 1, 1989.

PA 88-119: An act concerning the underground storage tank program.

This act authorizes the DEP commissioner to establish programs and adopt regulations to implement the underground storage tank requirements of the federal Resource Conservation and Recovery Act of 1976. State law already authorizes the commissioner, in consultation with the commissioner of public safety, to adopt regulations governing standards and criteria for nonresidential underground storage facilities. The act deletes the commissioner's specific authority to determine tank life expectancy or failure by monitoring or other means. Effective Date: October 1, 1988.

PA 88-122: An act concerning permits for sources of air pollution which violate regulations.

This act requires a person who controls a source of air pollution that violates DEP regulations to obtain a permit for it. Some sources that existed prior to the permit requirements do not have permits even though they must still abide by state air pollution laws and regulations. Effective date: October 1, 1988.

PA 88-168: An act concerning the state geological and natural history survey.

This act increases the amount that the State Geological and Natural History Survey Sales and Publications account may retain at a fiscal year's close from \$10,000 to \$30,000. It also allows money in the account to be spent for editing publications, as well as for printing and purchasing them for resale. Effective date: July 1, 1988.

PA 88-211: An act concerning orders issued because of pesticide contamination of groundwater.

This act excuses farmers who meet certain criteria from having to provide potable water to those whose wells become contaminated with pesticides the farmer used on agricultural or horti-

cultural products or on the land. The act continues to allow the DEP commissioner to order other responsible parties, including pesticide producers, to provide potable water. The act specifies that it does not limit private lawsuits against farmers for property damage or personal injury, nor does it prohibit the commissioner from issuing orders to farmers other than to provide potable water. The act applies to pesticide groundwater pollution discovered on or after its effective date. DEP potable water orders issued before that date remain in effect until revoked, modified, or amended by the commissioner. Effective date: Upon passage.

PA 88-231: An act promoting recycling and concerning packaging.

This act requires the administrative services (DAS) commissioner to prepare a plan to increase state purchase of goods made with recycled materials and allows him to give a price preference of up to 10 percent for purchase of these goods. It requires state agencies to develop and implement a recycling plan and a white paper recycling program. It also requires the transportation (DOT) commissioner to study the feasibility of using recycled demolition materials, concrete, and asphalt.

The act increases the membership of the municipal solid waste recycling advisory council and expands its field of study. It also increases various allocations from the recycling trust fund.

The act requires that certain plastic bottles sold in Connecticut be coded to identify their composition and bans the sale of beverage containers made of both plastic and steel or aluminum.

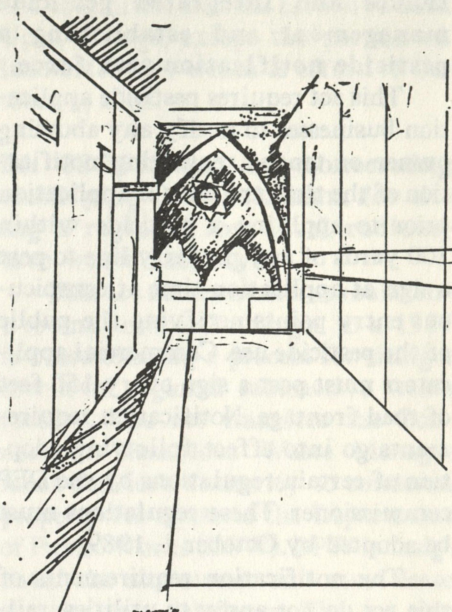
Effective date: October 1, 1988, except for the section on the allocation of funds, which is effective July 1, 1988. The sections on resource recovery contracts, the recycling advisory council, continuance of existing appropriations into the next fiscal year, and the DEP commissioner's studies of wastes that are harmful if incinerated and plastic bottle coding are effective upon passage.

PA 88-243: An act establishing a low-level radioactive waste disposal fund.

This act establishes a separate, nonlapsing low-level radioactive waste account within the General Fund, financed through assessments on low-level radioactive waste generators. During FY 1989, the DEP commissioner must equitably assess federally licensed nuclear power generating facilities for their reasonable pro-rata share of \$1 million.

The act establishes a task force and requires it to submit a report by January 1, 1989, recommending an equitable method of assessing low-level radioactive waste generators to finance the fund in the years after the \$1 million assessment. The task force consists of the chairmen and ranking members of the Energy and Public Utilities Committee, the Office of Policy and Management (OPM) secretary or his designee, the DEP commissioner or her designee, the chairman of the Public Utilities Control Authority, the executive director of the Hazardous Waste Management Service, and three representatives of low-level radioactive waste generators appointed by the DEP commissioner based on the amount of waste generated.

The commissioner must spend fund money, with the OPM secretary's approval, only to help the state fulfill its responsibilities under the Northeast Interstate Low-Level Radioactive Waste Compact to provide for disposal of low-level radioactive waste. Effective date: July 1, 1988.



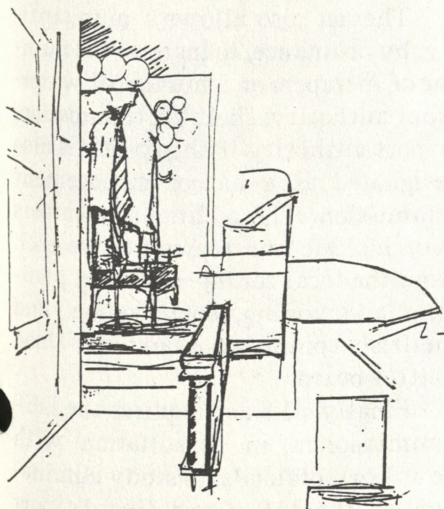
PA 88-246: An act establishing a civil penalty for violations of pesticide statutes and creating a state emergency response commission.

This act establishes a state emergency response commission; creates a civil penalty for violating the pesticide statutes; and, by making the existing penalties apply to the entire pesticide control chapter rather than just part I, it effectively increases the penalty for (1) illegal sale or use of sodium fluoroacetate (a powerful rodent killer) and (2) nonpermitted application of chemicals to state waters.

The act also allows rather than requires, as under prior law, the DEP commissioner to adopt regulations requiring distributors, transporters, and sellers of restricted or permitted use pesticides to maintain records concerning sale, shipment, or holding of such pesticides.

The act also extends the date by which the DEP commissioner must submit a report on pesticide pollution of groundwater to the General Assembly from July 1, 1988, to July 1, 1990. Effective date: Upon passage, except for the sections relating to the state emergency response commission and to the DEP regulations, which are effective October 1, 1988.

PA 88-247: An act concerning notification of the application of pes-



(Drawings by Margaret Furtak)

ticides and integrated pesticide management and establishing a pesticide notification task force.

This act requires pesticide application businesses to notify any abutting owner or tenant requesting notification of the time and date of application prior to applying a pesticide within 100 yards of any property line to post a sign at application time at conspicuous entry points notifying the public of the pesticide use. Commercial applicators must post a sign every 150 feet of road frontage. Notification requirements go into effect following adoption of certain regulations by the DEP commissioner. These regulations must be adopted by October 1, 1989.

The notification requirements of this act do not apply to utilities, railroad companies, pesticide application businesses, the state or municipalities when they apply pesticides to rights-of-way, distribution lines, and roadsides. The act establishes a task force to study the feasibility of, and alternatives to, notification of any pesticide applications made to agricultural lands, rights-of-way, distribution lines, and roadsides.

The act requires state agencies to consider "integrated pest manage-

ment" (IPM) when applying pesticides. IPM is defined as a comprehensive strategy aimed primarily at maintaining high crop quality with minimal pesticide use.

Finally, the act requires all businesses that apply or recommend pesticide applications to register as pesticide application businesses. Prior law exempted businesses with only one certified applicator. But single application businesses are still exempt from the \$60 business registration fee. Effective date: Upon passage for notification, the task force, and agency review of pesticide use. July 1, 1988, for integrated pest management requirements; and October 1, 1988, for pesticide application business matters and delegation of enforcement.

PA 88-324: An act requiring aquifer mapping.

This act requires the DEP commissioner to establish two levels for the modeling and mapping of well-field areas, zones of contribution, and recharge areas in aquifers. It requires water companies above a certain size to do their own mapping, and authorizes the commissioner to do the mapping for smaller companies and in other areas.

The act also requires municipalities with mapped aquifers to empower a board or commission to inventory land uses in certain areas. Finally, it increases the membership of the groundwater task force from 21 to 25, changes its duties, and appropriates \$25,000 for its use for FY 1988-89. Effective date: October 1, 1988, for mapping requirements; July 1, 1988, for the appropriation; and upon passage for the task force changes.

PA 88-336: An act concerning membership on the Bi-State Long Island Sound Marine Resources Committee and on harbor management commissions and requiring the commissioner of the DEP to study the elimination of certain United States Coast Guard detachments.

This act increases the membership of the Bi-State Long Island Sound Marine Resources Committee from eight to 18. Nine members represent Con-

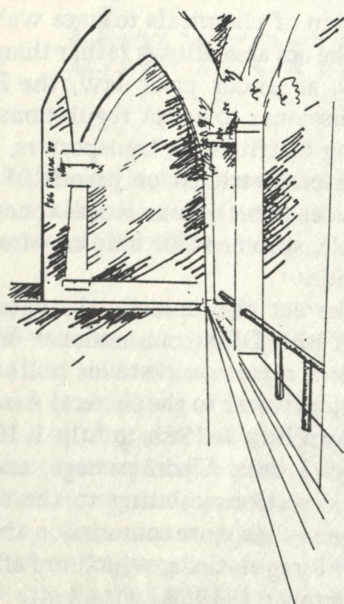


necticut and nine represent New York. The Connecticut appointees are three House members, one each appointed by the speaker and majority and minority leaders; three senators representing coastal municipalities, one each appointed by the Senate president *pro tempore* and majority and minority leaders; and the governor, the DEP commissioner, and the director of the Connecticut Coastal Zone Management Program, or their designees. Prior law authorized appointment of two House members by the speaker and two senators members by the president *pro tempore*.

The act requires the committee to recommend standardization of the jurisdiction of municipal harbor management, conservation, and shellfish commissions, and port and waterfront authorities.

The act also allows a municipality, by ordinance, to increase the number of members on a municipal waterfront authority, shellfish commission, or port authority if the agency is also designated as a harbor management commission. The additional members may include one representative each from the local zoning, planning, planning and zoning, conservation, and shellfish commissions and the flood control board.

Finally, the act requires the DEP commissioner, in consultation with New York officials, to study elimination of the U.S. Coast Guard's port



safety and marine inspection detachments in New London and reduction of U.S. Coast Guard patrols. The study must be submitted to the Environment Committee by January 15, 1989. Effective date: Upon passage

PA 88-341: An act concerning the disposal of biomedical waste.

This act requires hospitals to give the DEP commissioner the name of the person disposing of their biomedical waste, the amount of such waste, and its disposal site.

The act defines biomedical waste treatment facilities and, by considering them solid waste facilities, makes them subject to the commissioner's solid waste facility regulations. It also defines biomedical waste and generators of biomedical waste. Effective date: October 1, 1988.

PA 88-352: An act concerning payments by operators of solid waste landfills to municipalities, grants to municipalities for resource recovery facilities, and the statewide solid waste management plan.

This act requires the owner or operator of a solid waste landfill to pay 50 cents to the host municipality for each ton of waste it receives, even if the waste is delivered by a private hauler and even if it comes from the municipality that owns or operates the site. Prior law exempted from the fee waste delivered by the municipality that owns or operates the site, and a court decision interpreted the law as exempting private haulers who deliver waste.

The act requires the DEP commissioner to amend the state-wide solid waste management plan to include an assessment of the amount of landfill capacity needed for disposal of resources recovery residue, incinerator ash, and bulky waste (demolition and land clearing debris). The assessment must project annual capacity needed for the 20-year period beginning July 1, 1989, and a maximum and minimum number of landfills required to dispose of the material. The plan amendment must be publicly available by January 1, 1989.

The act makes it clear that committees overseeing joint municipal contracts for solid waste management are public instruments and political subdivisions of the state created to perform an essential public and governmental function.

Finally, the act makes changes in the two-year tipping fee subsidy available to municipalities that deliver their waste to resource recovery facilities. Effective date: Upon passage, except the tipping fee grant provision which is effective October 1, 1988, and the municipal contract provision which is effective July 1, 1988.

PA 88-354: An act implementing the recommendations of the water company lands task force.

This act requires water companies to use land sale proceeds for capital projects which improve or protect the water supply system or for land acquisition to protect water supply sources. It also specifies an accounting method that the Department of Public Utility Control (DPUC) must use with regard to certain sale proceeds.

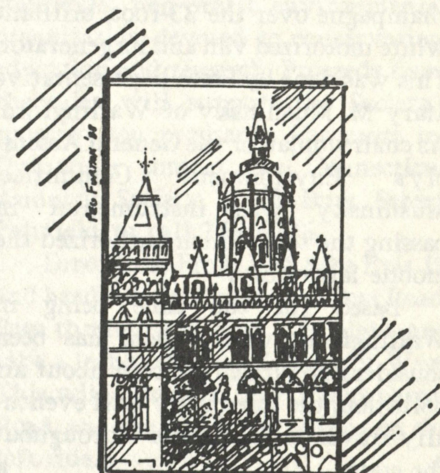
The act makes it clear that the Health Department must issue its permit concerning sale of water company land before DPUC can accept an application for sale of land. It requires an applicant for a Health Department permit to notify the chief executive and elected officials of the town where the land is located by certified mail 15 days before filing the application.

The act requires a water company to offer its land to other water companies or private nonprofit land holding organizations before selling it to the general public. Prior law required a first offering to the state or municipalities only. The act reduces from 180 to 100 days the time which these parties have to decide to make a purchase. It extends the life and adds to the responsibilities of the water company lands task force, and establishes an *ad hoc* committee to study the feasibility of government ownership of watershed lands, reservoirs, and treatment facilities owned by the Bridgeport Hydraulic Company and the Stamford Water Company. Finally, the act appropriates \$35,000 for the task force

and committee studies. Effective date: Upon passage, except the portion on land offerings, which is effective October 1, 1988.

PA 88-361: An act concerning modifying the mechanism for siting a regional low-level radioactive waste facility.

This act makes numerous substantive and technical changes to a 1987 law establishing a process for siting a low-level regional radioactive waste facility. The act transfers the Connecticut Hazardous Waste Management Service's authority to condemn property for a site to the Department of Public Works (DPW). DPW is designated the site owner and must lease the site to a developer. The act also makes changes in financial compensation arrangements for the host municipality most affected by the facility. It requires state indemnification of directors, officers, or employees of the service; gives the attorney general supervision over the service's civil legal affairs; specifies the service's site evaluation process; requires additional information from potential site operators; and limits the type of people entitled to appeal council decisions. The act specifies that the siting process is not limited to facilities that manage such waste. Finally, the act allows agencies developing regulations under prior law or the act to publish their notice of intent to adopt them as late as October 1, 1988, or July 1, 1989. Notices must usually be published within five months of a law's effective date. Effective date: Upon passage. ■



Mobile Air Lab

by
Wanda A. Rickerby

A major step forward in providing clean air for Connecticut citizens was taken in Wallingford on November 2 when a \$750,000 mobile laboratory for air analysis was officially christened.

The "Laboratory on Wheels" program is being operated by the DEP with funding from the Connecticut General Assembly. It will be used to analyze air samples brought to it from nearby areas where toxic emissions are suspected.

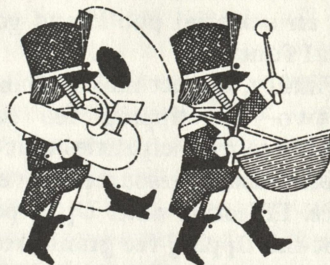
The mobile laboratory is equipped with state-of-the-art scientific instrumentation, including a tandem mass spectrometer and a gas chromatograph.

"This is an important moment because it will allow a new responsiveness to citizen concerns about unsafe air," said Leslie Carothers, Commissioner of the DEP.

Carothers cautioned, however, that the delicate and highly sensitive equipment was just starting a "shake-down" phase and that it would be several months before policy decisions could be made based on data from the Laboratory.

The official christening ceremony included the breaking of a bottle of champagne over the 33-foot, brilliant white motorized van and its generator. This was done by State Representative Mary M. Mushinsky of Wallingford. As chairwoman of the General Assembly's Environment Committee, Mushinsky was instrumental in passing the law which authorized the mobile laboratory.

Based for the time being in Wallingford, where there has been considerable citizen concern about air pollution, the laboratory will eventually travel to "hot spots" throughout the state. ■



Off-Season Camping

To provide our citizens with the opportunity for off season camping, the following areas have been designated to be utilized during the fall-winter camping season beginning October 1 and ending February 28.

WESTERN DISTRICT
Telephone: 485-0226

American Legion State Forest, Pleasant Valley - 15 sites. North of Pleasant Valley on West River Road.

Housatonic Meadows State Park, Cornwall Bridge - 25 sites. One mile north of Cornwall Bridge on Rte. 7.

Kettletown State Park, Southbury - 30 sites, Three+ miles south of I-84, Kettletown Rd. to Georges Hill Rd., 0.7 mile to entrance.

EASTERN DISTRICT
Telephone: 295-9523

Cockaponset State Forest, Had-dam - 12 sites. Two+ miles west of Chester on Rte. 148, north on Cedar Lake Rd. two miles.

Mashamoquet Brook State Park, Pomfret. Off Rte. 44.

October 1-31: Mashamoquet Brook Campground - 20 sites. Campground closed November 1.

November 1 - February 28: Indian Chair Youth Group Area. Camping by advance arrangement only.

Phone 928-6121 between 8:00 a.m. and 4:00 p.m.

Pachaug State Forest, Voluntown - 22 sites. Mt. Misery Campground located off Rte. 49, north of Voluntown.

Lots will be issued on a first-come, first-served basis. The camp stay is limited to seven nights, with an absence of three nights before returning, except at Kettletown State Park where the stay is limited to three nights with an absence of seven nights before returning. Standard fees will apply at most sites through October 10. Thereafter, no fees will be charged.

Please note that campgrounds may be closed early or temporarily due to unsatisfactory or dangerous natural conditions. In the event of snow, access to individual campsites may be limited to walk-in.

Your cooperation is requested in complying with the rules and regulations of the DEP. Have a pleasant camping experience.

New Publications

"If Connecticut's tomorrow depends on how its citizens make land use choices today," says Allan Williams of the DEP, "then everyone in this state should read a new book about creative land development now available from DEP's Natural Resource Center."

The book deals with creative ways of accommodating growth while preserving the rural ambiance so valued in New England. It is entitled *Dealing With Change in the Connecticut River Valley*, but "don't let the title fool you," Williams warns. "This book provides insight and guidance for anyone involved with the subdivision of undeveloped land, or for any citizen living in a community where that is occurring."

The handsomely illustrated 180-page, soft-cover book examines eight different potential development sites. Full-page, four-color plates show

the site as it looked before development, then as it would look under a conventional zoning approach and, finally, as it would appear using village clustering zoning or some other creative planning technique.

The design manual also contains a number of state-of-the-art model land use ordinances which show how the concepts can be translated into local law.

"This is by no means an anti-growth approach," Williams says. "In fact, both land conservationists and developers will appreciate this book because it shows how new development can be shaped and sited in a manner which respects the character of rural regions, and still be cost effective."

The new book is on sale for \$25 (plus \$1.88 tax and \$2.00 shipping) in the Maps and Publications sales room (Rm. 555) of the DEP's Natural Resource Center, 165 Capitol Avenue, Hartford, CT 06106. For further information, please call Phyllis Bannon at 566-7719.

Joshua's Tract Walk Book, just published by Joshua's Tract Conservation and Historic Trust, contains descriptions of all the significant natural areas, hiking trails, and canoeing spots in the following towns: Ashford, Chaplin, Columbia, Coventry, Eastford, Hampton, Lebanon, Mansfield, Scotland, Willington, and Windham.

Detailed descriptions and maps of each area with precise information on acreage, location, parking, and trails are included. The background and key features of each area are presented in some detail.

Longer trails, not limited to one natural area, are also described and suitable maps provided. Information about Joshua's Tract Conservation and Historic Trust is found in the introduction.

This 162-page, pocket-sized guide is available from the Trust for \$7.00 (includes tax and postage) by sending a check to: Joshua's Trust, c/o Trust Department, United Bank, 676 Main Street, Willimantic, CT 06226.

The Explorer's Guide to Nature in Eastern Connecticut is a new publication which invites you to explore nature in the 59 towns between the Connecticut River and Rhode Island. It describes activities and places to visit, most of which are available at little or no cost. Explorers of all ages can enjoy these adventures either on their own or in groups. Teachers and leaders of youth organizations will find this a handy guide to enjoyable and educational projects.

Here's how the *Guide* works. Entries are organized in categories: Places to Go (with a map); Teacher/Leader Workshops; and Publications. Descriptions of 50 organizations tell what is available, how to visit or participate, and if informational services are offered. Also, a publication list offers suggestions for finding more information about exploring nature.

The 36-page *Guide* was created as a public service by the Northeast Group of the Connecticut Chapter of the Sierra Club. To order a copy, send a \$2 donation (for printing and postage costs) to: Northeast Group, Connecticut Sierra Club, c/o Joan Hill, 23 Cards Mill Road, Columbia, CT 06237. ■



Christmas Trees

A very popular activity unique to the coming of the holiday season is the selection of a Christmas tree. The Connecticut Audubon Society manages a portion of their Smith Richardson Sanctuary as a demonstration tree farm. "We anticipate that the choose-and-cut tree sale will be very popular. It provides an enjoyable outing with family and friends as well as a learning experience for adults and children," says CAS Director of Sanctuary Operations, Louis Bacchiocchi.

The H. Smith Richardson Wildlife Sanctuary and Christmas Tree Farm, located on Sasco Creek Road in Westport, will be open beginning on Saturday and Sunday, December 3 and 4, from 10 a.m. to 4 p.m. The tree farm will also be open on subsequent weekends (December 10, 11, 17, and 18), and on certain weekdays by appointment, to provide members and others the opportunity to select a fresh tree.

Connecticut Audubon Society is a statewide, non-profit environmental organization devoted to conservation, education and research. Proceeds from the sales will support the Society's conservation programs. For more information, contact the Connecticut Audubon Society, 2325 Burr Street, Fairfield, or call 259-6305.

Directions: From I-95 take Exit 19 and head west on the Boston Post Road. Pass through the first stop light and take a left onto Kings Highway West. This will soon turn into Greens Farms Road, and the tree farm will be on the left side. ■

Eagle Watch in Southbury

The DEP's Wildlife Bureau has received numerous phone calls concerning the opening of the Shepaug Bald Eagle Observation Area, in Southbury, for the 1988-89 season. This year, the observation area will open after Christmas, on December 28, and close March 22. As in 1987-88, the area will be open Saturday, Sunday, and Wednesday, 9:00 a.m. to 1:00 p.m., and entry will be by reservation only.

Reservations may only be obtained by calling (203) 566-7195, Monday through Friday, 8:30 a.m. to 3:00 p.m., starting November 25. Just one reservation will be accepted per phone call.

Wildlife biologists expect this winter's eagle numbers to be as impressive and the activity as dramatic as that observed in 1987-88. If you decide to make a reservation, take advantage of pre-holiday sales and buy warm



shoes. The eagles' activity may warm your heart, but unless you have the

proper footwear, you'll still be left with cold feet.

Trailside Botanizer

Common Milkweed

by
Gale W. Carter
Illustration by
Pam Carter

COMMON MILKWEED (*Asclepias syriaca*) is conspicuous during all seasons of the year. Even during the cold of winter, its distinctive warty pod may stand out as part of the winter landscape. By this time, its stout, usually unbranched stem has turned a sooty black, and its once-green, curved, fruiting pods have popped open and have turned a silvery gray.

Common milkweed is one of our native species, usually found in fields, waste places, and beside roadsides. One of its conspicuous features is the presence of milky juice which flows when any part of the plant is broken.

This milkweed, with its large opposite leaves, grows to a height of up to



five feet. Its flowers are quite fragrant and appear in many-flowered, drooping clusters in the axils of the upper leaves. They range in color from pinkish-brown to purplish. The blossoming time is from June to August.

Pollination is by butterflies, bees, and wasps. The monarch butterfly is

particularly fond of this plant. Milkweeds have a rather complicated flower, with a slit where insects often get their feet caught. In the process, they pick up a sticky mass of pollen, called pollinis, which resembles a saddlebag. This saddlebag is carried to another flower by the visiting insect.

Common milkweed has so many uses that it doesn't seem appropriate to refer to it as a weed. Young milkweed shoots, flowerbuds, and the undeveloped seed pods can all be eaten as a vegetable if properly cooked. The milky sap, roots, and seeds were all used medically in a variety of ways by the American Indian. The silk from milkweed seeds has been used in stuffing pillows and mattresses and for life preservers, while the milkweed pods are used in crafts and in dried arrangements. In recent years a method has been devised for extracting oil from milkweed for use in industry.

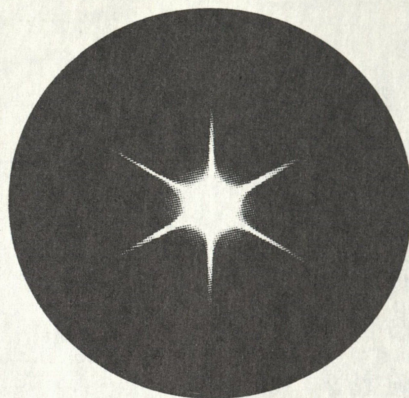
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The Star of Peace

by
Francine Jackson

IT'S VERY STRANGE how such a small entry in the Bible could have caused such speculation. For almost 2,000 years, Matthew's passing remark that the Magi following a star to the stable at Bethlehem has led to all types of hypotheses, from the scientific to the religious to the surreal. And still, after all this time, we are no closer to identifying the "star" than King Herod was.

At least, today we can identify certain phenomena that probably did not lure the Wise Men to their goal. A meteor, or "falling star," one of those streaks of light you occasionally see in the sky, can be seen on almost any clear night and lasts too short a time to seriously lead anyone anywhere.



Likewise, a comet has never been seriously considered. The most important reason is that at times comets, strange pieces of dust and gas which travel around the sun, were considered omens of evil — hardly the sign to welcome the Prince of Peace.

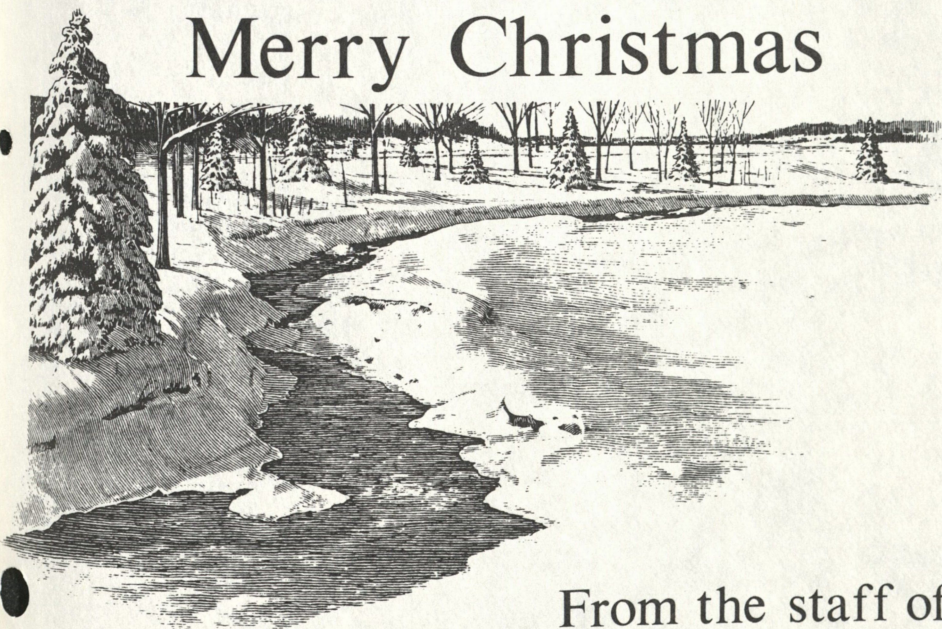
Johannes Kepler, one of the more important astronomers of the 17th century, was the first to postulate that the alleged Star of Bethlehem could have been a planetary arrangement. He noted that in 7-6 B.C. the planets Jupiter and Saturn came very close to-

gether (were in conjunction) three times. At the third conjunction, they were joined by Mars, and the alleged close approach of all three planets caused the individual brightnesses of them all to intensify. About a decade ago, an alternative hypothesis involved the planet Jupiter undergoing a triple conjunction with the bright star Regulus in the constellation Leo the Lion from 2-1 B.C. At the third conjunction, Jupiter was joined by Venus, and again their combined lights possibly made a spectacle easily seen by people accustomed to observing the heavens, as the Magi were.

In today's world, other explanations have been offered, from the mundane "nothing," a misinterpretation, to a UFO, to a true religious sign. Of course, whether the Star will ever be satisfactorily explained, or whether it will be shown to never have happened, at this time of year it is nice to have a sign to remind us of the spirit of peace so reminiscent of this holiday season. ■

To All Our Readers,

A Very Merry Christmas



From the staff of
Connecticut Environment

Endnote

"The strongest prayer, one well-nigh almighty in what it can effect, and the most exalted work a man can do, proceed from a pure heart. The more pure it is, the more powerful, and the more exalted, useful, laudable, and perfect in its prayer and work. A pure heart is capable of anything."

Meister Eckhart



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